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Part II

Department of Transportation

Federal Aviation Administration

Air Carriers Certification and Operations; Inoperative Instruments or Equipment

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 43, 91, 121, 125, and 135

[Docket No. 22320; Notice No. 81-14]

Air Carriers Certification and Operations; Inoperative Instruments or Equipment

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This notice proposes to revise the Federal Aviation Regulations to allow the operation of powered aircraft with certain installed instruments and equipment inoperative which the Administrator finds are not necessary for the safe operation of the aircraft. The proposal would consolidate minimum equipment list (MEL) requirements presently contained in various parts of the Federal Aviation Regulations into one regulation. It also would broaden the application of these provisions, provide relief to other categories and classes of aircraft such as helicopters and single-engine airplanes, and allow the operation of aircraft without an MEL when certain instruments or items of equipment are inoperative. The proposal standardizes and simplifies the regulatory procedures applicable to operations with inoperable instruments and equipment when those items are not needed for the safe operation of the aircraft.

DATE: Comments must be received on or before January 25, 1982.

ADDRESS: Comments on this proposal may be mailed in duplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attn: Rules Docket (AGC-204), Docket No. 22320, 800 Independence Ave., SW., Washington, D.C. 20591; or delivered in duplicate to: Room 916, 800 Independence Ave., SW., Washington, D.C. 20591. Comments must be marked: Docket No. 22320. Comments may be inspected at Room 916 between 8:30 a.m. and 5 p.m., Monday through Friday.

FOR FURTHER INFORMATION CONTACT: Raymond E. Ramakis, Regulatory Projects Branch (AVS-24), Safety Regulations Staff, Associate Administrator for Aviation Standards, Federal Aviation Administration, 800 Independence Ave., SW., Washington, D.C. 20591; telephone (202) 755-8716.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Comments relating to environmental, energy, or economic impacts that might result from adoption of the proposal contained in this notice are invited. Communications should identify the regulatory document or notice number and be submitted in duplicate to the address above. All communications received on or before the closing date for comments will be considered by the Administrator before taking action on the proposed rule. The proposals contained in this notice may be changed in the light of comments received. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report summarizing each substantive public contact with FAA personnel concerned with this rulemaking will be filed in the docket. Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit with those comments a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 22320." The postcard will be date and time stamped and returned to the commenter.

Availability of NPRM

Any person may obtain a copy of this notice of proposed rulemaking (NPRM) by submitting a request to the Federal Aviation Administration, Office of Public Affairs, Attention: Public Information Center, APA-430, 800 Independence Ave., SW., Washington, D.C. 20591, or by calling (202) 426-8058. Communications must identify the notice number of this NPRM. Persons interested in being placed on a mailing list for future NPRM's should also request a copy of Advisory Circular No. 11-2, Notice of Proposed Rulemaking Distribution System, which describes the application procedure.

Background

The concept of the minimum equipment list (MEL) was first adopted for air carrier and commercial operators of large airplanes (Part 121) in 1954 when it was recognized that a flight or series of flights may be continued with certain inoperable instruments and equipment under appropriate circumstances. Many aircraft have installed equipment that is not essential for safe operations under all operating conditions. Much of that equipment is required for certain kinds of operations (such as visual flight rules (VFR) day, night, or instrument flight rules (IFR)) or for certain kinds of operating conditions (such as operating in icing conditions). Other equipment (such as entertainment systems and galley equipment) may be installed in the aircraft for the convenience of the operator. The regulations require that the aircraft, with the installed equipment, must continue to meet the regulatory standards under which it was type certificated, and the equipment itself must meet the applicable requirements in those standards.

The MEL concept was adopted for air taxi and commercial operators (Part 135) in December 1978 and for airplanes having a seating capacity of 20 or more passengers or a maximum payload capacity of 6,000 pounds or more (Part 125) in February 1981.

In an attempt to provide the same benefits to operators of general aviation aircraft, the FAA issued Amendment No. 91-157 (44 FR 43716; July 26, 1979). The amendment adopted a new § 91.30 which allowed an operator to obtain authority to operate a multiengine aircraft with certain inoperable instruments or equipment. Procedurally, § 91.30 provided a regulatory mechanism for operations with inoperable instruments and equipment that are covered under an MEL without operating contrary to §§ 91.27, 91.29, and 91.165. The amendment responded to public proposals submitted as part of the Airworthiness Review Program and incorporated provisions for the use of an MEL for general aviation operators of multiengine aircraft.

After Amendment No. 91-157 was published, the FAA received strong negative reaction from the public in the form of Congressional inquiries and a petition for rulemaking from the National Business Aircraft Association (NBAA) requesting delay of the effective date of the amendment. The NBAA states that the rule is confusing and poorly structured, and the time required for compliance is too short considering basic master minimum equipment lists (MMEL's) are not available. It also became apparent that general aviation operators may not have been fully aware that certification and airworthiness regulations could cause an aircraft to be rendered unairworthy with inoperable instruments or items of equipment not needed for a particular type of operation (for example, night lighting equipment during day VFR operations). These certification and airworthiness regulations will be explained in this preamble. Also, some

pilots might have used the listing of equipment in § 91.33, which addresses only certain types of operations (such as VFR (night) and Category II operations), as the sole standard for determining whether an instrument or item of equipment is required to be operational. Use of § 91.33 as the sole standard, to the exclusion of the certification and airworthiness regulations, is erroneous.

Accordingly, what the FAA intended by § 91.30 as a relaxation and a benefit for the general aviation community was perceived not only as a restriction, but also as applying only to multiengine aircraft, thus excluding single-engine aircraft. In consideration of the comments received, the FAA issued Amendment No. 91–160 on October 26, 1979 (44 FR 62885; November 1, 1979). This amendment suspended the effectivity of § 91.30 to allow the FAA to make necessary changes to the minimum equipment list provisions in the general operating rules.

Regulatory Requirements

Airworthiness standards are regulatory conditions precedent which must be met before issuing a type certificate. Section 21.181(a)(1) provides that a standard airworthiness certificate for an aircraft is effective as long as the maintenance, preventive maintenance, and alterations are performed in accordance with Parts 43 and 91. Under § 91.27(a), aircraft operations are prohibited unless the aircraft has a current airworthiness certificate. Section 91.165 provides that aircraft must be regularly inspected and that between those inspections defects must be repaired in accordance with Part 43. Under § 43.13, the person maintaining an aircraft must ensure that the aircraft is at least equal to its original or properly altered condition following maintenance. In this regard, § 91.29 prohibits the operation of an aircraft unless it is in an airworthy condition. These conditions must be maintained to ensure that the aircraft is equal to its original or properly altered condition to continue the effectiveness of the airworthiness certificate.

Discussion

Under the provisions of these rules, aircraft operations with items of installed equipment inoperable are prohibited even though the aircraft could be operated safely with the equipment inoperative or removed. Adherence to such a rigid position probably would inhibit operators from ordering backup systems and optional items of convenience equipment which exceed the regulatory requirements for type certification of a paticular aircraft.

If some deviations from the type certificated configuration and equipment required by the operating rules are not permitted, the aircraft cannot be flown unless all such equipment is operable. Experience with operations conducted under Parts 121 and 135 has proven that the operation of every system or component installed on the aircraft is not necessary when the remaining operative instruments and equipment provide continued safe operations. The FAA has determined that certain deviations from these requirements can now be extended to general aviation operators (Part 91) provided the Administrator finds an equivalent level of safety is maintained by appropriate operating limitations, by transferring the function to another operating component, or by referring to other instruments or components providing the required information.

It is important to note, however, that all items which are related to the airworthiness of the aircraft that are not included, on the list are automatically required to be operative. Therefore, the MEL does not include obviously required items such as wings, rudders, flaps, engines, landing gear, etc. Additionally, the MEL may not include items which do not affect the airworthiness of the aircraft, such as galley equipment, entertainment systems, passenger convenience items, etc. The MEL cannot authorize noncompliance with an operating rule. For example, § 91.33 specifies instrument and equipment requirements for certain conditions of flight. One instrument required for instrument flight rules flight is a gyroscopic bank-and-pitch indicator. An MEL cannot authorize instrument flight in an aircraft without at least one gyroscopic bank-and-pitch indicator.

Unless otherwise specified, the FAA does not define where or when an inoperative item is to be repaired or replaced, but indicates through approval of MEL's those instruments and items of equipment that may be inoperative for certain flight conditions with the intent that no flight can take off from an airport with inoperative equipment other than that specified. The failure of instruments or items of equipment exceeding those allowed to be inoperative by the MEL causes the aircraft to be unairworthy. The MEL is not intended to provide for continued operation of the aircraft for an indefinite period with inoperative items. The basis purpose of the MEL is to allow aircraft operations with inoperative equipment within the framework of a controlled, continuous airworthiness maintenance program or a sound program of repairs and parts replacement. It is important that the operator make repairs as soon as practicable since additional malfunctions may require the aircraft to be taken out of service.

In summary, the MEL is designed to provide operators with the authority to operate the aircraft with certain items or components inoperative provided the Administrator finds an equivalent level of safety is maintained by appropriate operating limitations, by transfer of the function to another operating component, or by reference to other instruments or components providing the required information. Thus, the MEL allows deviations from the type certificate requirement that every item of equipment or instrument installed in an aircraft must be operable. This concept has been satisfactorily and safely utilized in air carrier operations for the past 27 years. The MEL concept is consistent with the exception to compliance with airworthiness provisions contained in § 21.21 of the FAR. That section prescribes the findings the Administrator makes for issuing a type certificate. It requires that the design and the product "* * * meet the applicable airworthiness requirements of the [FAR] *or that any airworthiness provisions not complied with are compensated for by factors that provide an equivalent level of safety; * * *.*" (Emphasis added.) The alternative finding in the underscored language is consistent with an MEL which allows operation without items required by the airworthiness provisions because an equivalent level of safety is prescribed by the MEL.

The term "equivalent level of safety," as used in this preamble, means a level of safety equivalent to the airworthiness requirements under which the aircraft was type certificated for each kind of operation to be conducted.

This proposal will impose no new burdens for Part 121, 125, or 135 operators since current §§ 121.627 (b) and (c), 125.201, and 135.179 allow operations to be conducted under those parts with certain inoperative instruments or items of equipment provided there is an existing MMEL. These sections provide relief from the requirements that all instruments and equipment must be operative before a flight may be initiated. On July 26, 1979, the FAA published Amendment 91–157 intended to provide this relief to Part 91 operators. The FAA subsequently suspended the effective date of the amendment due to the need to provide additional clarity and time to implement the rule. It should be noted that no

comments were received regarding the burdens placed on an operator in obtaining MEL approval. The FAA realizes there is a small cost associated with obtaining this approval and solicits cost data from commenters on this proposal.

To obtain MEL approval by Part 121, 125, or 135 operators under current regulations, an operator must develop an MEL which is then approved by the certificate-holding Flight Standards district office. The operator's MEL is based on a master minimum equipment list (MMEL) developed by the FAA. The MEL then becomes part of the operator's manual. The operator's MEL must provide for repair or replacement of inoperative items, ensure aircraft records available to the pilot before flight include an entry describing the inoperative items, ensure that procedures for continuing flight with inoperative instruments or items of equipment are included in the certificate-holder's manual, and ensure the pilot complies with procedures contained in the MEL and the certificate-holder's manual.

It is estimated that a Part 121 certificate holder requires approximately 100 hours to review an MMEL and adapt it to its operations. An additional 80 hours is estimated to develop the maintenance procedures for dispatching an aircraft with inoperative instruments or items of equipment. Using figures of $20/hour operational costs and $25/hour maintenance costs, a Part 121 operator incurs a one-time cost of approximately $4,000 to develop and obtain FAA approval of an MEL for each make and model aircraft.

Part 135 operators operating smaller aircraft than Part 121 operators incur one-time costs of approximately $800 to develop and obtain approval to use an MEL. This figure is based on an estimated 20 hours each for operations and maintenance review at $20/hour.

For operations conducted under Part 125, experience shows that most operators utilize the MMEL as developed by the FAA. Allowing 15 hours at $10/hour to review the MMEL, insert the operator's name, and obtain FAA approval, an operator may expend $150 for each MEL it wishes approval to use.

Reporting and recordkeeping requirements for preparing policies and procedures manuals are contained in §§ 121.133, 125.71, and 135.21. These manuals must include procedures for operating an aircraft with inoperative instruments or items of equipment.

This notice proposes to eliminate §§ 121.627 (b) and (c), 125.201, and 135.179 and incorporate them in § 91.30. The operator would still be required to develop an MEL and obtain FAA approval. No new costs would be incurred, nor would there be additional reporting or recordkeeping requirements for these operators.

Since there is no provision currently in Part 91 to allow a pilot to operate an aircraft with an MEL, an owner/operator will incur costs in adapting an MMEL to its operations. Depending on the size and complexity of the aircraft involved, the FAA estimates the one-time cost not to exceed $150 (15 hours at $10/hour).

At the time an aircraft is type certificated, the manufacturer, in conjunction with the FAA, develops a list of instruments and equipment that may be inoperative during specified conditions. This list is contained in the FAA-approved flight manual according to § 23.1583(h). If there is no MMEL for the aircraft, an operator may use the listing in the flight manual to conduct those specified operations with those instruments or equipment inoperative. There is no cost to the operator for utilizing this listing. An operator may add items to this list by applying to a Flight Standards district office and showing that an acceptable level of safety will be maintained. The cost to the operator is estimated at $40 for 2 hours to obtain FAA approval.

If there is no FAA-approved MMEL or flight manual listing, an operator may prepare an operating limitations statement for approval to operate with inoperative instruments or items of equipment. The cost to the operator is estimated at $40 for 2 hours to develop the statement and submit it to an FAA Flight Standards district office for approval.

While some operators may incur costs in adapting MMEL's, adding items to the inoperative instrument or equipment list in the FAA-approved flight manual, or developing an operating limitations statement, these costs are considered minimal. Parts 121, 125, and 135 operators will not incur additional reporting or recordkeeping requirements since they are already required to incorporate into the flight manual procedures for operating with inoperative instruments or equipment. As stated previously, the FAA invites comments on these cost estimates and any reporting or recordkeeping burdens associated with proposed § 91.30.

Description of the Proposed Amendment

This notice proposes substantive revisions to § 91.30 and extends the applicability to operations conducted under Parts 121, 123, 125, and 135. Present sections would be revised or deleted, as appropriate, to remove any redundancy from those parts.

This proposal provides for an operator to obtain authorization to operate an aircraft with certain instruments or items of equipment inoperative which do not affect the safe operation of the aircraft. If an FAA-approved MMEL has been developed for a particular aircraft, the MMEL is used as the primary document to provide a means for the operator to develop an MEL thereby achieving regulatory relief from the requirement that everything installed in or on the aircraft must work. Not all aircraft will have an approved MMEL. For those aircraft, the operator can obtain relief through the FAA-approved flight manual or operating limitations statement containing a list of instruments or equipment which may be inoperative under specific conditions.

The *master minimum equipment list* (MMEL) is developed by the Flight Operations Evaluation Board (FOEB). The FOEB participants include FAA airworthiness and operations specialists who have a combined familiarity with the airworthiness and operating rules concerning instruments and equipment and have a comprehensive knowledge of the aircraft systems, components, and operating limitations. Development of the MMEL is coordinated with the aircraft manufacturer and industry users to provide flexibility while maintaining an equivalent level of safety. Items which require an operations or maintenance procedure in order to list that item in an MEL are designated in the remarks section of the MMEL. These designations indicate that the operator is responsible for developing an appropriate procedure before that particular item can be included in an approved MEL. The MMEL may be revised to add additional instruments or items of equipment as necessary.

The *minimum equipment list* (MEL) is developed by the operator for a particular operation. An MEL may only be developed if there is an approved MMEL in existence for the aircraft type. Within the constraints of the MMEL, the operator develops the operational and maintenance procedures required and lists the instruments and equipment installed in the operator's aircraft. The list is submitted to the local Flight Standards district office for approval. A copy of the FAA-approved MEL for the operator must be carried in each aircraft and must be available to the flightcrew. An MEL may not be less restrictive than an MMEL.

The *FAA-approved flight manual* is developed by the manufacturer during type certification and may contain a list

of instruments and equipment that may be inoperative under specified operations. To provide for adding items to this list after the aircraft is certificated, operators would apply to a Flight Standards district office and provide sufficient information to establish that an equivalent level of safety would be maintained with the additional instrument or item of equipment inoperative. This will allow the Flight Standards district office to approve operation of the aircraft with those items inoperative which exceed the minimum required for type certification for each kind of operation.

An *operating limitations statement* may be developed by an operator for aircraft not having an FAA-approved MMEL, MEL, or list of required instruments and equipment in the flight manual. An operator may obtain an operating limitations statement by submitting to a Flight Standards district office a list of those instruments or items of equipment that may be inoperative and sufficient information to establish that an equivalent level of safety will be maintained. That district office will issue, on a case-by-case basis, an operating limitations statement which authorizes operation of the aircraft with inoperative instruments or items of equipment which exceed the minimum required for type certification for a particular condition of flight. For example, if the position lights are inoperative, the operating limitations statement would not allow the aircraft to be operated at night or in IFR conditions. Appropriate FAA directives, orders, and advisory circulars will be issued to provide guidance on operating limitations statements.

Description of Specific Regulatory Proposals

The regulatory plan proposed in this notice involves a revision to § 91.30 and companion proposed changes to §§ 43.11, 91.165, 121.303, 121.627, 125.201, 135.23, 135.143, and 135.179.

Section 43.11

This notice proposes a significant relaxation in the present rules regarding return of an aircraft to service with inoperative instruments or items of equipment. Under present § 43.11, if a person finds discrepancies which affect airworthiness during an annual,100-hour, or progressive inspection, the aircraft may not be returned to service. It is proposed to add a new paragraph (c) to cover the return to service with inoperative instruments and items of equipment allowed by proposed § 91.30. The person approving the aircraft for return to service after any annual, 100-hour, or progressive inspection would be required to do three things. First, that person is required to ensure that the inoperative instrument or item of equipment is included in an MEL, FAA-approved flight manual, or in an operating limitations statement. Second, that person must inspect each inoperative instrument or item of equipment and determine that its inoperable condition does not adversely affect the intended function of any operable instrument or item of equipment or the airworthiness of the aircraft. Third, after making that inspection and determination, that person must make an entry in the aircraft maintenance records which describes the inoperative instrument or item of equipment. Since the aircraft maintenance records are available to the pilot, the entry will provide a ready means for the pilot to determine which instruments and equipment are inoperative.

Section 91.30

Under the proposal, § 91.30 would be revised and its applicability would be extended to Parts 121, 123, 125, and 135 certificate holders. Since proposed § 91.30 would allow operations with inoperative instruments and equipment only under the circumstances specified in that section, it is necessary to prohibit all other operations of powered civil aircraft with a standard category U.S. airworthiness certificate with inoperative items. It also is limited to powered civil aircraft because these aircraft are of sufficient complexity to warrant the relief which is being proposed. The scope of § 91.30 is limited to aircraft with a U.S. standard category airworthiness certificate because other categories of aircraft have special rules and are not amenable to use of the MEL concept.

Proposed § 91.30(a)(1) applies only to Part 91 operations. It would allow Part 91 operators to operate with inoperative instruments and items of equipment if there is an MMEL for the aircraft and the operator obtains FAA approval for use of an MEL tailored to a particular operation. It is contemplated that aircraft manufacturers request the FAA to develop MMEL's.

When an MEL has been approved for a particular operator, there are only two conditions which must be met for use of the MEL. First, the pilot must comply with the approved procedures in the MEL. Second, an aircraft may not be operated with an instrument or item of equipment inoperative which is required to maintain an equivalent level of safety.

Proposed § 91.30(a)(2) addresses the case of an aircraft which does not have an MMEL. These aircraft may be operated by a Part 91 operator with inoperative instruments and items of equipment provided there is either an FAA-approved flight manual or an FAA-approved operating limitations statement containing an equipment list that authorizes operation with specified inoperative instruments or items of equipment.

Proposed § 91.30(a)(3) would allow Parts 121, 123, 125, and 135 certificate holders to operate an aircraft with inoperative instruments and items of equipment which are included in an MEL approved for the particular make and model of aircraft for the particular certificate holder. With the exception of the limited circumstance for Part 135 operators covered by proposed § 91.30(a)(4), this means that no Part 121, 123, 125, or 135 certificate holder may operate an aircraft with inoperative instruments or items of equipment except in accordance with an approved MEL. There are several conditions which must be met under proposed § 91.30(a)(3). First, repair or replacement of the inoperative unit must be accomplished as specified in the approved MEL. For example, if anti-icing equipment is inoperative, the MEL would require that anti-icing equipment be repaired or replaced before the aircraft would be dispatched into icing conditions. Second, the MEL and procedures for continuing flight beyond an airport where repairs or replacements can be made to the inoperative unit are included in the certificate holder's manual. The intention here is that the MEL and appropriate procedures must identify certain instruments and items of equipment which must be repaired or replaced before an aircraft can depart an airport where the unit can be repaired or replaced. This is essential since additional failures may result in an increase in crew workload that would be detrimental to the level of safety or result in an unairworthy aircraft.

Section 91.30(a)(4) is proposed because it is contemplated that some types of aircraft operated by Part 135 certificate holders will not have an MMEL. This paragraph would allow operation with inoperative units in accordance with paragraph (a)(2) provided the certificate holder's manual contains appropriate approved procedures for such operations and both the pilot in command and the certificate holder comply with those procedures.

When using an MEL, FAA-approved flight manual, or the FAA-approved operating limitations statement, inoperative instruments or items of equipment must be identified by an appropriate entry in the aircraft maintenance or other appropriate record and that record must be available to the pilot before each flight. This will ensure that in all cases the pilot is informed prior to flight of those instruments or items of equipment that are inoperative.

Proposed § 91.30(b) provides that an FAA-approved MMEL, MEL, flight manual, or operating limitations statement constitutes an amendment to the aircraft type certificate. Under this concept, the inoperative instruments and equipment are not considered to be airworthiness defects and the aircraft conforms to its type certificate and continues to be in an airworthy condition with a valid airworthiness certificate provided there is compliance with all the conditions and limitations in the MMEL, MEL, and § 91.30(a)(2).

Proposed § 91.30(c) would prohibit operation of any aircraft with inoperative instruments or items of equipment which are required by an airworthiness directive to be operable. This means that an MMEL, MEL, flight manual, or operating limitations statement may not be used to allow aircraft operation with these items inoperative.

Proposed § 91.30(d) would establish the basic requirement that the FAA-approved MMEL, MEL, flight manual, or operating limitations statement may not allow operations with instruments or items of equipment inoperative which are required to maintain a level of safety equivalent to the airworthiness requirements, as determined by the FAA. Operating and maintenance limitations and/or procedures will be established to ensure that this level of safety is maintained.

Proposed § 91.30(e) would require a copy of the approved MEL, flight manual, or operating limitations statement to be carried on each aircraft and be available to the flightcrew. This is necessary to provide the flightcrew with a list of instruments and items of equipment that are allowed to be inoperative and to inform the flightcrew of any operating procedures required to compensate for the inoperative items.

Section 91.165

In pertinent part, present § 91.165 requires each owner or operator of an aircraft to have defects repaired between inspections as prescribed in Part 43. This, in effect, precludes operating with inoperative instruments and equipment. It is proposed to amend this section by adding the phrase "except as provided by § 91.30(a) (1) and (2)." This would provide an exception to repair defects between inspections if the instruments and items of equipment may be inoperative under the provisions of an MMEL, MEL, FAA-approved flight manual, or FAA-approved operating limitations statement.

Section 121.303

An editorial change is proposed to paragraph (d) to reference § 91.30(a) (1) and (3) and (b) through (e) since it is proposed to delete § 121.627 (b) and (c).

Section 121.627

It is proposed to delete paragraphs (b) and (c) and the designation (a) in the first paragraph. This section prescribes procedures to be followed when instruments or equipment become inoperative en route and for continuing flight beyond a terminal point with inoperative instruments or equipment. This proposal would not change present requirements but would make § 91.30 applicable to Part 121 procedures for operation with inoperative instruments and items of equipment.

Section 125.201

It is proposed to delete this section and mark it "Reserved." This is consistent with the proposed plan to have one regulation in Part 91 applicable to all operations with inoperative instruments and equipment.

Section 135.23

The reference in § 135.23(i), Manual contents, which requires including procedures to implement the present Part 135 MEL provision is changed to read "§ 91.30(a)(3) and (4) and (b) through (e)." Thus, a Part 135 operator would be required to include procedures to implement the provisions of § 91.30 applicable to Air Taxi Commercial Operators (ATCO) certificate holders.

Section 135.143

A conforming change to § 135.143(b) is proposed to reference § 91.30(a)(3) and (4) and (b) through (e) instead of the present § 135.179 MEL provision.

Section 135.179

Finally, it is proposed to delete § 135.179 and mark it "Reserved." This would implement the concept in this proposal to make one MEL provision in Part 91 applicable to all operations with inoperative instruments and equipment.

Regulatory Evaluation

A regulatory evaluation is included in the docket for this action. The FAA determined that there are no additional costs imposed on operators of powered civil aircraft and there is a moderate cost impact on the Federal Government. Specifically, this notice provides a broad category of relief for individual operators of powered civil aircraft by allowing, under specified conditions, operation of aircraft with inoperable instruments or items of equipment. Certain operators might incur minor costs, for example, in preparing lists of inoperable instruments or items of equipment for Flight Standards district office review and approval. However, the options in this notice provide large measures of relief to operators of Part 91—operated airplanes, rotorcraft, and Part 135—operated single-engine airplanes from the requirement that all instruments or items of equipment be operable in order for the aircraft to be in an airworthy condition. The FAA costs in administering four major requirements of this notice: (1) the FAA will develop additional MMEL's for single-engine airplanes, rotorcraft, and general aviation multiengine airplanes. The average cost is estimated at $3,000 per aircraft make and model. No additional cost to the FAA for MMEL development for all other multiengine airplanes is assumed as this process is currently available for those airplanes. (2) The FAA will process additional MEL applications for Part 91—operated airplanes, rotorcraft, and Part 135—operated single-engine airplanes, the average cost of which is estimated at $200 per aircraft. No additional cost to the FAA for MEL review for other powered civil airplanes is assumed as this process is currently available for those airplanes. (3) The FAA may develop sections to aircraft flight manuals during type certification that authorize aircraft operations with specified instruments or items of equipment inoperable. Because of the lack of directly relevant data, the FAA is unable to estimate the average unit cost of this requirement to the Federal Government. (4) The FAA will review operator-submitted lists of inoperable instruments or items of equipment and issue operating limitations statements accordingly. Because of the lack of directly relevant data, the FAA is unable to estimate the average unit cost of this review requirement to the Federal Government. Additionally, costs will be incurred in the revision and/or amendment process to all of these documents as necessary.

Furthermore, the FAA is not able to accurately estimate the total number of aircraft or specific aircraft models for

which operators will request relief in each of these methods.

The FAA invites comments on the assumptions and specific uncertainties addressed, as well as any information pertaining to the costs imposed by this proposal on the individual aircraft owner or the Federal Government.

Benefits

Implementing the proposals contained in this notice provides benefits in terms of substantial cost savings to operators of powered civil aircraft in the aggregate. The greatest cost savings will be realized by operators of Part 91—operated airplanes and rotorcraft and single-engine airplanes operated under Part 135 as this regulation provides a means of relief to these operators from current requirements that prohibit operation of these aircraft with instruments or items of equipment inoperable regardless of the purpose or condition of flight. These means, including MMEL development, MEL review, sections to the FAA-authorized flight manual pertaining to inoperable instruments and items of equipment, and the operating limitations statements, should reduce aircraft downtime and eliminate (under certain conditions) the cost to the operator of repairing certain instruments or items of equipment. Further, cost savings will accrue to all operators of powered civil aircraft as this regulation allows an individual qualified under Part 43 to return an aircraft to service with inoperable instruments or items of equipment after an annual, 100-hour, or progressive inspection provided the inoperable instruments or items are covered in an MEL, FAA-approved flight manual, or approved operating limitations statement.

The total cost savings in a given year will vary according to the number of aircraft that have inoperable instruments or items of equipment that are not currently provided relief by one of the four options listed, the frequency of operations with instruments or items not necessary for the safe operation of the aircraft, the cost to repair the inoperable instrument or items, and the costs relating to aircraft downtime.

The FAA invites comments on these and any other types of benefits and/or cost savings that will accrue to individual aircraft operators as a result of this proposal.

The Proposed Amendments

Accordingly, the Federal Aviation Administration proposes to amend Parts 43, 91, 121, 125, and 135 of 14 CFR Chapter 1 as follows:

PART 43—MAINTENANCE, PREVENTIVE MAINTENANCE, REBUILDING, AND ALTERATION

1. By adding a paragraph (c) to § 43.11 to read as follows:

§ 43.11 Content, form, and disposition of annual, 100-hour, and progressive inspection records.

* * * * *

(c) Each person approving an aircraft for return to service with inoperative instruments or equipment after any annual, 100-hour, or progressive inspection must ascertain that they are included in a minimum equipment list, FAA-approved flight manual, or operating limitations statement as provided in § 91.30 and shall—

(1) Inspect each inoperative instrument or item of equipment to determine that its inoperable condition does not adversely affect the intended function of any operable instrument or item of equipment; and

(2) Make an entry in the aircraft maintenance records containing a description of the irregularity as it relates to the inoperable instrument or item of equipment.

PART 91—GENERAL OPERATING AND FLIGHT RULES

2. By revising § 91.30 to read as follows:

§ 91.30 Inoperative instruments or equipment.

(a) No person may operate a powered civil aircraft with a standard category U.S. airworthiness certificate when an instrument or item of equipment is inoperative except—

(1) An aircraft may be operated under this part with an instrument or item of equipment inoperative when the instrument or item of equipment is included in a master minimum equipment list (MMEL) approved for the aircraft and is included in a minimum equipment list (MEL) for that make and model aircraft approved by the FAA for that operator if—

(i) The pilot complies with the approved procedures contained in the MEL;

(ii) The aircraft records available to the pilot before flight include an entry describing the inoperative instrument or item of equipment; and

(iii) The inoperative instrument or item of equipment is repaired or replaced as specified in the operator's approved MEL;

(2) An aircraft may be operated under this part without an FAA-approved MEL with an instrument or item of equipment inoperative if there is either an FAA-approved flight manual or an FAA-approved operating limitations statement containing an equipment list that authorizes operation of the aircraft with those specified instruments or items of equipment inoperative if the inoperative instruments or items of equipment are identified and an appropriate entry is made in the aircraft maintenance record and that record is available to the pilot before flight;

(3) An aircraft with inoperative instruments or items of equipment may be operated by a certificate holder under Part 121, 123, 125, or 135 only if there is an approved MMEL for the aircraft and they are included in a minimum equipment list (MEL) for that make and model aircraft approved by the FAA for that certificate holder if—

(i) The inoperative instrument or item of equipment is repaired or replaced as specified in the certificate holder's approved MEL;

(ii) The aircraft records available to the pilot before flight include an entry describing the inoperative instruments or items of equipment;

(iii) The MEL and the procedures for continuing flight beyond an airport where repairs or replacements can be made to the inoperative instrument or item of equipment are included in the certificate holder's manual; and

(iv) The pilot complies with the approved procedures contained in the MEL and the certificate holder's manual; or

(4) If there is no MMEL, the aircraft may be operated by a certificate holder under Part 135 with an instrument or item of equipment inoperative when—

(i) That aircraft is operated in accordance with paragraph (a)(2) of this section;

(ii) The aircraft records available to the pilot before flight include an entry describing the inoperative instruments or items of equipment;

(iii) The certificate holder's manual contains appropriate approved procedures for these operations; and

(iv) The pilot in command and the certificate holder comply with these procedures.

(b) An approved MMEL, MEL, FFA-approved flight manual, or operating limitations statement constitutes an amendment to the aircraft type certificate.

(c) No person may operate an aircraft with instruments or items of equipment inoperative which are required by an

airworthiness directive to be operable unless the airworthiness directive provides otherwise.

(d) No FAA-approved MMEL, MEL, flight manual, or operating limitations statement may allow operations with instruments or items of equipment inoperative which are required to maintain a level of safety equivalent to the airworthiness requirements under which the aircraft was type certificated for each kind of operation to be conducted.

(e) A copy of the FAA-approved MEL, flight manual, or operating limitations statement must be carried in each aircraft and must be available to the flightcrew.

3. By revising § 91.165 to read as follows:

§ 91.165 Maintenance required.

Each owner or operator of an aircraft shall have that aircraft inspected as prescribed in Subpart D or §§ 91.169 and 91.170 of this part and shall, except as provided by § 91.30(a) (1) and (2), have defects repaired between required inspections as prescribed in Part 43 of this chapter. In addition, the owner or operator shall ensure that maintenance personnel make appropriate entries in the aircraft and maintenance records indicating the aircraft has been released to service.

PART 121—CERTIFICATION AND OPERATIONS: DOMESTIC, FLAG, AND SUPPLEMENTAL AIR CARRIERS AND COMMERCIAL OPERATORS OF LARGE AIRCRAFT

§ 121.303 [Amended]

4. By amending the first sentence of § 121.303(d) by removing the reference "§ 121.627 (b) and (c)" and substituting the reference "§ 91.30(a) (1) and (3) and (b) through (e)" in its place.

§ 121.627 [Amended]

5. By removing the designation "(a)" in the first paragraph and by removing paragraphs (b) and (c).

PART 125—CERTIFICATION AND OPERATION RULES FOR CERTAIN LARGE AIRPLANES

§ 125.201 [Reserved]

6. By removing and reserving § 125.201.

PART 135—AIR TAXI OPERATORS AND COMMERCIAL OPERATORS

§ 135.23 [Amended]

7. By amending the first sentence of § 135.23(i) by removing the reference "§ 135.179" and substituting the reference "§ 91.30(a) (3) and (4) and (b) through (e)" in its place.

§ 135.143 [Amended]

8. By amending the first sentence of § 135.143(b) by removing the reference "§ 135.179" and substituting the reference "§ 91.30(a) (3) and (4) and (b) through (e)" in its place.

§ 135.179 [Reserved]

9. By removing and reserving § 135.179.

(Secs. 313(a), 601, 603, 604, 605, and 607 Federal Aviation Act of 1958, as amended (49 U.S.C. §§ 1354(a), 1421, 1423, 1424, 1425, and 1427); Sec. 6(c), Dept of Trans. Act (49 U.S.C. § 1655(c)); and 14 CFR 11.45)

Note.—This proposal provides relief from existing regulatory requirements and consolidates information contained within several regulations into a single operating rule. The FAA has determined that this document proposes a regulation which is not considered major under Executive Order 12291 or significant under Department of Transportation Regulatory Policies and Procedures (44 FR 11034; February 26, 1979) and will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A draft regulatory evaluation has been prepared for this action and has been placed in the docket. A copy of it may be obtained by contacting the person identified under the caption "FOR FURTHER INFORMATION CONTACT."

Issued in Washington, D.C., on September 16, 1981.

Kenneth S. Hunt,

Director of Flight Operations.

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